1:Williams E,G-5 (1923-1925) 1930
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the various natural resources of the bush would probably enable the native to tide over a period in which the taro gardens failed completely.

Such clothing as he wears is made by beating out the bark of a *ficus* tree; his belt is plaited with thin strips of cane; his pipe is a tube of bamboo; his cheeks are streaked with a red paint obtained from a seed; his ready-made luggage-strap or the mooring cable for his canoe is a creeper withe or a length of rattan cane. These are only a few of the uses to which the Orokaiva, true forest-dweller that he is, may put the multifarious products of his environment. One cannot fail to be impressed by his wonderful familiarity with the forest—so perplexing to one who is not a woodsman—and with his extempore skill and resource in turning all its products to account.

Wide areas of the plain—though still but a small proportion of its total extent—are covered with *alang alang*, or long grass. The apparent spread of these grass patches, and the corresponding deforestation have caused the Government some anxiety. As yet, however, this aspect of the matter has made no appeal to the native. The grass patch, entirely unproductive as it is, and almost invincible to cultivation, yet provides an annual supply of game when it is burnt off by the hunting party. It seems, indeed, as if the grass were regarded in the light of a special asset to its owners.

Fauna

Of the wild animals which these burnings drive into the nets of the hunters most important is *sus papuensis*, that fierce long-legged animal which abounds throughout Papua. But there is an unclassified multitude of marsupials ranging downwards in size from the wallaby, all of which are welcome to the Orokaiva, who despises no meat that comes his way. Of the tree-climbing marsupials the most notable is the cuscus, with beautifully dappled fur of white, yellow, and brown, which is cut into strips and worn in long streamers from the armlet of the warrior; and in the hills a larger animal, the tree-kangaroo, whose rich brown fur is used for the same purpose. Most beautiful of all is the

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136 delicate little *Hajojo* which resembles a flying squirrel, and which makes the prettiest if not always the most docile of pets. There are many more bush creatures perfectly known to Papuan (if not so well to European) zoology, and all, while they serve the more utilitarian purpose of diet, are especially interesting because their names constantly recur in the Aesopian legends with which Orokaiva folk-lore abounds.

136 Reptiles are not less common than in other parts of the
825 Territory. Snakes, from the python to the smallest and deadliest, are regarded with a queer mixture of feelings in which sometimes veneration, sometimes horror, and sometimes hunger gains the upper hand. The lizard is killed,
[251] its flesh dried in the smoke against some future feast, and its skin stretched over the drum as a tympanum. Crocodiles, the most terrible of the Papuan's natural enemies, abound near the river-mouths, and their attacks have sometimes been so frequent on village pigs and dogs and on women filling their gourds at the water's edge, that favourable settlements have had to be abandoned. Yet even the crocodile is often outwitted in the legends and occasionally caught and eaten in reality.

Flying-foxes or fruit-bats are numerous and destructive. From their camping-grounds, where they hang by day in lazy myriads from the branches, they steadily wing their way at evening to the gardens which they mean to plunder, and after this nocturnal migration may be seen steadily beating back at earliest daybreak. To the Orokaiva as to ourselves there is a hint of the spectral about the flying-fox, and it is not surprising that it should find a place in their legends and theories of the life after death.

136 Birds are of interest to the northern native mainly as
30 providing the plumes which, fastened together in head-
231 dresses, make him, as they are meant to do, more attractive in love and more terrifying in war. Thus parrots, kingfishers, and birds of paradise supply in their brilliant plumage one of the principal kinds of convertible wealth. The domestic cock is valued for the same reason, being mercilessly plucked and bereft of his sweeping tail feathers in

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order to serve the vanity of his owner. The great corrugated beak of the hornbill is valued as an ornament, and apparently in earlier times was an emblem of the homicide. The bird is frequently seen as a pet, being accommodated like the parrot or the white cockatoo in a little house of its own. Sometimes the young cassowary is domesticated, until as he grows up his aggressive manners and sharp claws make him an unmanageable member of village society, when he usually takes to the bush and rejoins his own kind. The cassowary is common in the hills though comparatively rare on the plains.

Even in so sketchy a list of the creatures which as friends or enemies share the habitat of the Orokaiva one should not fail to make a passing mention of the insects. It is well enough known that the most terrible predatory creature of Papua is the mosquito, and parts of the Northern Division, particularly the lower Mambare, deserve the bad reputation which it has given them. A magistrate wrote, I think without exaggeration, of this district:

'It is infested by multitudes of the most voracious mosquitoes, so that for that reason alone, one falls to wondering what could induce any one to live there. The native is not by any means immune to the bites of these pests. On my visits to these villages, I have seen the people sitting full in the acrid smoke of large wood fires, or beating their bodies with palm fronds, and they have complained to me that life is unbearable on account of the mosquitoes.' [1]

The scourge of mosquitoes has been bad enough to drive out whole village communities. Manau is said to have migrated from the present site of Bebewa, some distance up the river simply to escape them. Leaving behind the mosquitoes, however, the emigrants have established themselves in a region of countless sand-flies, and it is questionable whether their second state is not worse than their first. These infinitesimal insects (whose irritating bite is out of all proportion to their size) infest the brown sea-beaches of the north-east coast. But while they make life unbearable for a European it would seem as if the natives enjoy a certain amount of immunity from their poison.

[1] S. A. Greenland in *Annual Report*, 1912–13, p. 127.

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[136] One might mention other insects that appeal to the imagination of the Orokaiva—the innocent-looking March-fly with its treacherous sting, the carpenter bee that riddles the light timbers of native houses, the warlike black ants [825] with their sudden migrations, the fire-flies in which, floating and luminous, he sees the eyeballs of the dead. None of these have much practical importance, but it is interesting to note that the Orokaiva, making his farewell address to the dead, bids him go to a place where March-flies and mosquitoes will cease from troubling him.

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538 that she had cut her thumb off. At that she said, 'Now I am a cuscus,' and ever since the animal has been remarkable for the queer little member which so resembles a truncated human thumb.

244 794 789 Sometimes dying leaves are snipped off the growing plant. In a ceremony of the new 'Taro cult' a band of excited men were pushing their way through the taro gardens, headed by one or two leaders who continually sprayed the plants with medicine from their mouths, and here and there as they passed snapped off large leaves. The reason for this, as the leaders themselves explained the matter, was that, as with a fully grown taro the outer leaves fall, it would expedite this development to anticipate it, and make the leaves fall now.

244 I do not know of any other kind of trimming or pruning, save sometimes in the interests of tidiness. On the whole garden plants, large and small, are left very much to themselves. Some exception, however, is made in the [249] case of sugar-cane, the long stalks being bound together and supported by poles, lest they fall and so become a prey to rot and rat.

241 136 There seem, however, to be few recognized pests in the ordinary sense of the word; the principal enemies of the native horticulturist are not microbes but animals, bats, and birds. He must be constantly on guard against the bush-pig and minor foes—the flying fox, the rat, the wallaby, and the cockatoo, not to mention his fellow man. Formerly, in a kind of native Paradise where work [173] was at a minimum, the bush-pig was content with bush food—roots and herbs and such-like. But exchanging confidences with the rat, he learnt that the latter's food was taro and succulent sugar-cane. After that he invaded the gardens, and it has been necessary ever since to build a fence.

417 241 The garden fence should properly surround the whole group of clan gardens. It is built in sections, each man being responsible for the part nearest his own garden. But the work is rather laborious, and the gardens are

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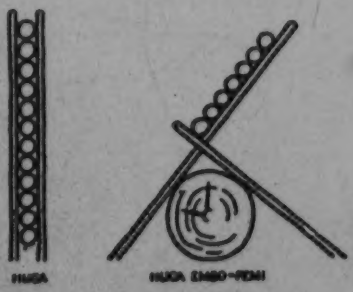
often well advanced before the circle is complete. The actual building of the fence is men's work, though women carry timber. The reason why women do not build is, I am told, that the fence would be no good.[1]

The several varieties of pig-trap have been mentioned before (pp. 113–14). They are commonly built just within the garden fence so that the raiders are not only frustrated but captured. Until the fence is completed some people must live in the garden houses to scare away the pigs with their voices. It is said also that the smell of smoke will make them suspicious and keep them off, and one may sometimes see a large fire piled with green leaves and kindled towards evening. On moonlight nights men will wait with spears on the garden platforms and attack the pig among the taro—a really hazardous undertaking, and one which is responsible for many terrible casualties. Nowadays the villagers will often beseech the loan of one's shot-gun and shooting boy on a moonlight evening.

Some well-advanced gardens become infested with rat-like marsupials. There are miniature traps for them—constructed on the principle of the pig-trap with a falling weight—and another ingenious kind of pitfall, which, like the former, is rather a plaything of little boys than a serious business of the gardener. The pitfall is a round hole with steep or shelving sides; from the edge towards the centre there projects a piece of wood, with what may be called a green-stick fracture; on the tip of this little platform is placed the bait. The rat climbs out

[1] The ordinary fence (*Hoga*) consists of a series of horizontal rails laid one atop of the other and between uprights at frequent intervals. There is another kind, *Hoga-Embo-pani* (possibly the 'big man' or 'older man' fence), where advantage is taken of a large tree-trunk, and the fence made to slope across it. Two cross-sections are shown:



HUGA HUGA EMBO-PANI

2: Williams E, G-5 (1923-1925) 1928
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241 224 towards the bait, passes the fatal point of weakness, and, as the stick breaks under his weight, falls into the abysm.

241 224 136 A more serious nuisance to the gardener is the flying fox (*dipere*), a very destructive creature whose favourite foods are bananas, papaw, and bread-fruit. In certain parts, their daylight camping grounds, one may see flocks of them hanging in dense clusters from the high branches, or circling slowly round to settle again and renew their slumbers. In the Isivita district may be found a kind of snare for the flying foxes suspended in a high tree. It takes the form of a roughly knitted bag, just large enough to hold a bread-fruit. To this bag are attached a number of running nooses, say six or seven inches long, which form a confused tangle all around it. The bat attacks the bread-fruit in its clumsy fashion; to reach the fruit it can hardly avoid slipping its head into a noose, and then, trying to get clear, hangs itself. Another contrivance, somewhat devilish, was seen at Wasida. The cane palms have trailing branches with cruel recurved thorns which have a way of tearing your shirt or sweeping your hat off as you pass by in the bush. A cluster of these slender trailers is tied in a bunch to a stick, much after the manner of a witch's broom, and the villager stands in the darkness by his banana tree, the witch's broom or *asora* held close to the bunch of fruit. When the flying fox settles, flapping noisily on the bananas, one swift jerk of the *asora* brings him down, with the grappling hooks in the delicate membranes of his wings.

241 223 136 The only bird which does much harm to the natives is the white cockatoo, who plays havoc with young coco-nuts. In some villages long cables of rattan cane are attached to the tops of the coco-nut palms, sometimes with hollow shells of the cycad *Puga* for rattles. Sometimes the native will aim a stone with his sling. But as the cockatoo is a bold bird and the native an easy-going man, the young coco-nuts for the most part continue to be gnawed.

241 674 There is yet another garden pest—the dishonest neigh-